

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: July 13, 2020

1 Identification

- **Product identifier**
- **Trade name:** Lemon Extract
- **Product code:** LE5000
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS02 GHS07
- **Signal word:** Danger
- **Hazard statements:**
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.

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- P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P261 Avoid breathing mist, vapors, or spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves and eye protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
 P370+P378 In case of fire: Use for extinction: Alcohol resistant foam or water spray.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

64-17-5	Ethanol	90-100%
	 Flam. Liq. 2, H225  Eye Irrit. 2A, H319	
5989-27-5	d-limonene	<5%
	 Flam. Liq. 3, H226  Asp. Tox. 1, H304  Skin Irrit. 2, H315; Skin Sens. 1, H317	
80-56-8	alpha-Pinene	<1%
	 Flam. Liq. 3, H226  Asp. Tox. 1, H304  Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	
5392-40-5	Citral	<1%
	 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1B, H317	

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice/attention.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Allergic reactions
Causes eye irritation.
Gastric or intestinal disorders when ingested.
- **Danger:** May cause sensitization by skin contact.
- **Indication of any immediate medical attention and special treatment needed:**
Medical supervision for at least 48 hours.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
Contains d-limonene, alpha-Pinene, Citral. May produce an allergic reaction.
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Alcohol resistant foam
Water fog / haze
Carbon dioxide
Gaseous extinguishing agents
Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
Highly flammable liquid and vapor.
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:**
Cool endangered containers with water fog.
Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Keep away from ignition sources.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

· **Information about protection against explosions and fires:**

Highly flammable liquid and vapor.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Flammable gas-air mixtures may be formed in empty containers/receptacles.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

· **Further information about storage conditions:** Keep containers tightly sealed.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

64-17-5 Ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1900 mg/m ³ , 1000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm
	A3

80-56-8 alpha-Pinene

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TLV (USA)	Long-term value: 112 mg/m ³ , 20 ppm DSEN
EL (Canada)	Long-term value: 20 ppm S(D)
EV (Canada)	Long-term value: 20 ppm
LMPE (Mexico)	Long-term value: 20 ppm A4, SEN
5392-40-5 Citral	
TLV (USA)	Long-term value: 32* mg/m ³ , 5* ppm Skin; DSEN; *inhalable fraction + vapor
LMPE (Mexico)	Long-term value: 5 ppm A4, PIEL, SEN, IFV

· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**



Protective gloves

· Material of gloves

A recommendation for a suitable glove material is not available. Testing will be required to determine the suitability of any potential glove materials.

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid

Color: Colorless

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· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	>36 °C (>96.8 °F)
· Flash point:	20 °C (68 °F)
· Flammability (solid, gaseous):	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits	
Lower:	3.5 Vol %
Upper:	15 Vol %
· Oxidizing properties:	Non-oxidizing.
· Vapor pressure at 20 °C (68 °F):	59 hPa (44.3 mm Hg)
· Density at 25 °C (77 °F):	0.803-0.823 g/cm ³ (6.7-6.87 lbs/gal)
· Relative density at 20 °C (68 °F):	0.806-0.826
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Used empty containers may contain product gases which form explosive mixtures with air.
Highly flammable liquid and vapor.
Reacts with strong oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Keep ignition sources away - Do not smoke.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products**

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Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

· Information on toxicological effects

· **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	>40000-200000 mg/kg (rat, female)
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64-17-5 Ethanol

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4h	20000 mg/l (rat)

5989-27-5 d-limonene

Oral	LD50	>2000 mg/kg (rat, female)
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· Primary irritant effect:

· **On the skin:** Based on available data, the classification criteria are not met.

· **On the eye:** Causes eye irritation.

· **Sensitization:** Sensitization possible through skin contact.

· IARC (International Agency for Research on Cancer):

64-17-5	Ethanol	1
5989-27-5	d-limonene	3

· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** Causes serious eye irritation.

· **Repeated dose toxicity:** May cause sensitization by skin contact.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

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· **Aquatic toxicity**

5989-27-5 d-limonene

LC50 <1 mg/l (pimephales promelas)

EC50 0.307 mg/l (daphnia)

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Ecotoxical effects:**

· **Remark:** Toxic for fish

· **Additional ecological information**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR/RID/ADN, IMDG, IATA**

UN1197

· **UN proper shipping name**

· **DOT**

· **ADR/RID/ADN**

· **IMDG**

· **IATA**

Extracts, flavoring, liquid

EXTRACTS, FLAVOURING, LIQUID, ENVIRONMENTALLY HAZARDOUS

EXTRACTS, FLAVOURING, LIQUID (d-limonene, alpha-PINENE), MARINE POLLUTANT

EXTRACTS, FLAVOURING, LIQUID

· **Transport hazard class(es)**

· **DOT**



· **Class**

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· Label 3

· ADR/RID/ADN



· Class 3 (F1)

· Label 3

· IMDG



· Class 3

· Label 3

· IATA



· Class 3

· Label 3

· Packing group

· DOT, ADR/RID/ADN, IMDG, IATA II

· Environmental hazards

Product contains environmentally hazardous substances: d-limonene

· Marine pollutant:

Yes (DOT)

Symbol (fish and tree)

· Special precautions for user

Warning: Flammable liquids

· Hazard identification number (Kemler code):

33

· EMS Number:

F-E, S-E

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code

Not applicable.

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· United States (USA)

· SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

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None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	Ethanol
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· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	Ethanol
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· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

64-17-5	Ethanol	1
5989-27-5	d-limonene	3

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Asp. Tox. 1: Aspiration hazard – Category 1

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

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Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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